

Patent Points

NOW STARTING MY 31ST YEAR...

30 Years, 602 Patents Issued

I'm honored to have had the privilege of writing patents for many highly-talented inventors over the last 30 years. A total of 602 patents I've written have issued as of October 2024.

My first patent application was filed in November 1993, and issued less than a year later. This patent was for a Memory Module (called a SIMM back then) with a parity generator, saving the cost of the 9th memory chip.

I wrote an early World-Wide-Web Server patent in 1996. A client request was first made to a load balancer. Once the requested resource was determined, the connection is transferred to the node with the requested resource. The virtual address of the load balancer is sent back from the node as the source address, rather than the node's actual address.

With this source address change, different nodes can store different resources, and bottlenecks are avoided. This patent was extensively litigated yet withstood the legal attacks. It expired in 2016 after its 20-year lifetime ended.

90% Success Rate

Overall, 90% of the patents I have written have been allowed. I have written 602 issued patents, including continuations and divisionals, but have lost only 67 cases in 30 years.

My success rate for the last 8 years, from Oct. 2016 to Oct. 2024, is a little bit better, at 94%. I've had 94 original cases issue, but had 6 original cases finally rejected.

My current 90% success rate is consistent with the last three times I calculated my statistics, in 2016, 2006, and in 1997.

From 1994 to 2016, my success rate was 90%. From 1994 to 2006, my success rate was higher, at 95%, and from 1994 to 1997 my success rate was lower, at 84%.

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450 M\$ in 2 Months - patent verdicts

In July 2024 Amazon was ordered to pay 122 M\$ to a small adtech company for violating its patents. Later, Western Digital was ordered to pay 262 M\$ for violating patents from an Austrian scientist. Then in August Cisco was ordered to pay 67 M\$ to a small communications software company since Cisco's widely deployed WebEx platform was found to violate the small company's patents. That's a total of 451 M\$ in just 2 months!

Pooling Patents

Small companies have always been at a disadvantage when negotiating with giant corporations. Large companies can drag out negotiations and wear down less-well-capitalized patent owners, even when those patent owners assert patents that are critical components of products made by the larger companies. Filing a lawsuit as a last resort or for negotiating leverage can drain the limited finances of the small patent owner as the larger company introduces delaying legal tactics.

Enter the patent pool. Several small companies band together, throwing their patents into a pool of patents. A patent licensing firm typically manages the patent pool, now negotiating a larger pool of patents from several small companies. Having a third party asserting patents from several small companies reduces the risk of the large company retaliating against the small company.

Often these pool operators will specialize in one technical field. For example, Avanci of Dallas, Texas has patent pools for connected vehicles. Its 4G patent pool has patents from 57 companies that are licensed to 61 companies. Sisvel of Luxembourg has a WiFi-6 patent pool and recently ended litigation with Acer with a license deal. Standard licensing rates from Sisvel are about 50 cents per unit.

Sometimes these patent pools are built with patents used to implement a technical standard, such as 4G or WiFi. These Standard Essential Patents (SEP) are offered to all on Fair, Reasonable And Non-Discriminatory (FRAND) terms.

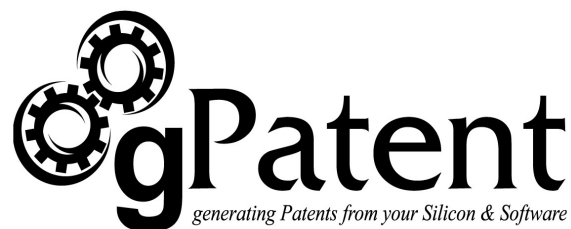
Patent of the Year

My informal "Patent of the Year" is shown on the next page.

An Integrated Circuit (IC) package has a ferrite Electro-Magnetic Interference (EMI) shield between an IC chip and an air-core inductor that are all inside a hybrid lead-frame package. EMI generated by the inductor is blocked by the ferrite shield to prevent interference on the IC chip.

This patent was issued about 2 years after its filing date.

Congratulations to all the inventors !





US011990422B2

(12) **United States Patent**
Ng et al.

(10) **Patent No.:** US 11,990,422 B2
(45) **Date of Patent:** May 21, 2024

(54) **FERRITE ELECTRO-MAGNETIC INTERFERENCE (EMI) SHIELD BETWEEN AN INTEGRATED-CIRCUIT (IC) CHIP AND AN AIR-CORE INDUCTOR ALL INSIDE A HYBRID LEAD-FRAME PACKAGE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,428,245 A 6/1995 Lin et al.
6,501,364 B1 12/2002 Hui et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 101064208 A 10/2007
CN 103247596 A 8/2013
(Continued)

OTHER PUBLICATIONS

Mohan, M. del Mar Hershenson, S. P. Boyd and T. H. Lee, "Simple accurate expressions for planar spiral inductances", IEEE Journal of Solid-State Circuits, vol. 34, No. 10, pp. 1419-1424, Oct. 1999.

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 320 days.

(21) Appl. No.: **17/693,566**

(22) Filed: **Mar. 14, 2022**

(65) **Prior Publication Data**
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(51) **Int. Cl.**
H01L 23/64 (2006.01)
H01L 23/00 (2006.01)
(Continued)

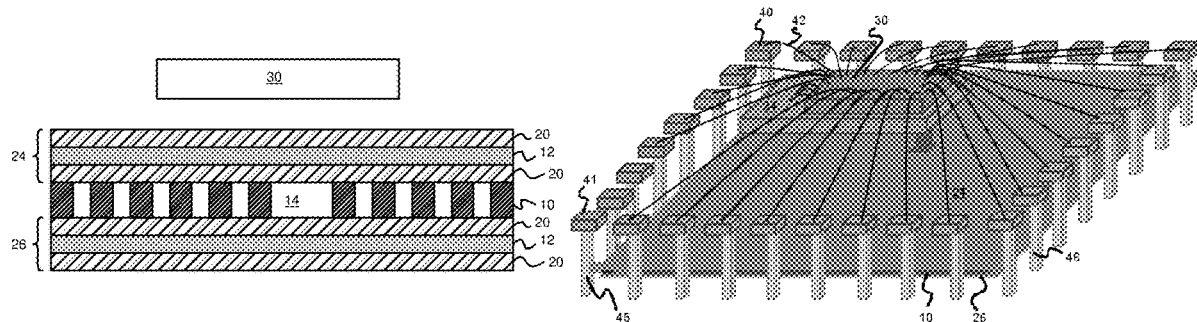
(52) **U.S. Cl.**
CPC **H01L 23/552** (2013.01); **H01L 23/49861** (2013.01); **H01L 23/645** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H01L 23/645; H01L 23/64; H01L 23/60; H01L 23/58; H01L 23/585
See application file for complete search history.

(57) **ABSTRACT**

An Integrated Circuit (IC) package has a ferrite-dielectric shield between a planar inductor coil and a semiconductor chip. The shield blocks Electro-Magnetic Interference (EMI) generated by currents in the inductor coil from reaching the semiconductor chip. The shield has a ferrite layer surrounded by upper and lower dielectric laminate layers to prevent electrical shorts. The center end of the inductor coil connects to the semiconductor chip through a center post that fits through an opening in the shield that is over the air core center of the inductor coil. The center post can connect to a die attach pad that the semiconductor chip is mounted to. Bonding wires connect pads on the semiconductor chip to lead-frame pads on lead-frame risers that end at external package connectors. The outer end of the inductor coil connects to lead-frame outer risers also having external package connectors such as pins or bonding balls.

20 Claims, 13 Drawing Sheets



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602 Patents Issued

After 30 years of writing patents as a full-time Patent Agent, 602 applications that I've written have now issued as patents. Congratulations inventors!

You can view the 602 issued patents I've written at:

www.gpatent.com

Rates Set for 2025

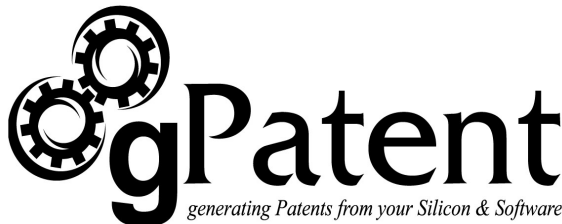
My hourly rate for 2025 will be \$460 per hour, billed in quarter-hour increments. Fixed-price quotes are available for patent applications to facilitate budgeting and avoid expensive surprises.

Prosecution work such as amendments and other paperwork is billed at the hourly rate. Litigation-support work is billed at a higher rate. Patent searches are billed at a flat \$800 for U.S. abstract searches. Patents can be viewed on-line.

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Address Correction Requested